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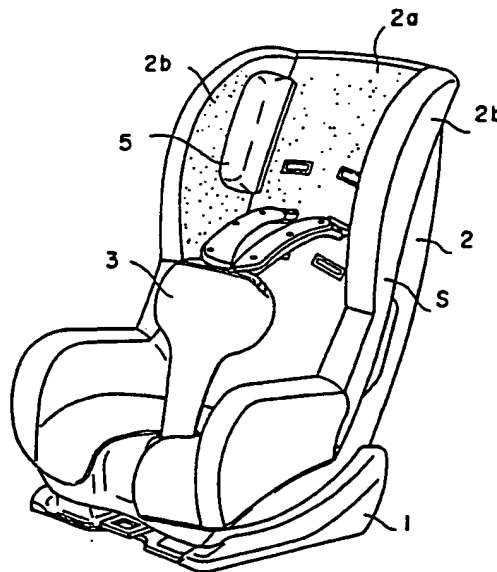
INT CL<sup>5</sup> A47C, B60N

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(54) Child restraint seat for vehicles

(57) A child restraint seat for vehicles includes a seat body (2) equipped with devices (3a, 3b) for restraining a child in the seat and adapted to be placed on a seat of a vehicle and held in position by a seat belt with which the vehicle is equipped and a pillow (5) that can be removably mounted on a seat back (2a, 2b) of the seat. The seat body has on a surface of an outer cover (S) which covers the seat back thereof an engaged surface having a loop member (4 or 2a, 2b) of a hook and loop cloth fastener. The pillow (5) has on a surface of an outer cover which covers the pillow an engaging surface having a hook member (6) which engages with the loop member of the hook and loop fastener to hold the pillow in place on the seat back.

FIG. 3



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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FIG. 1

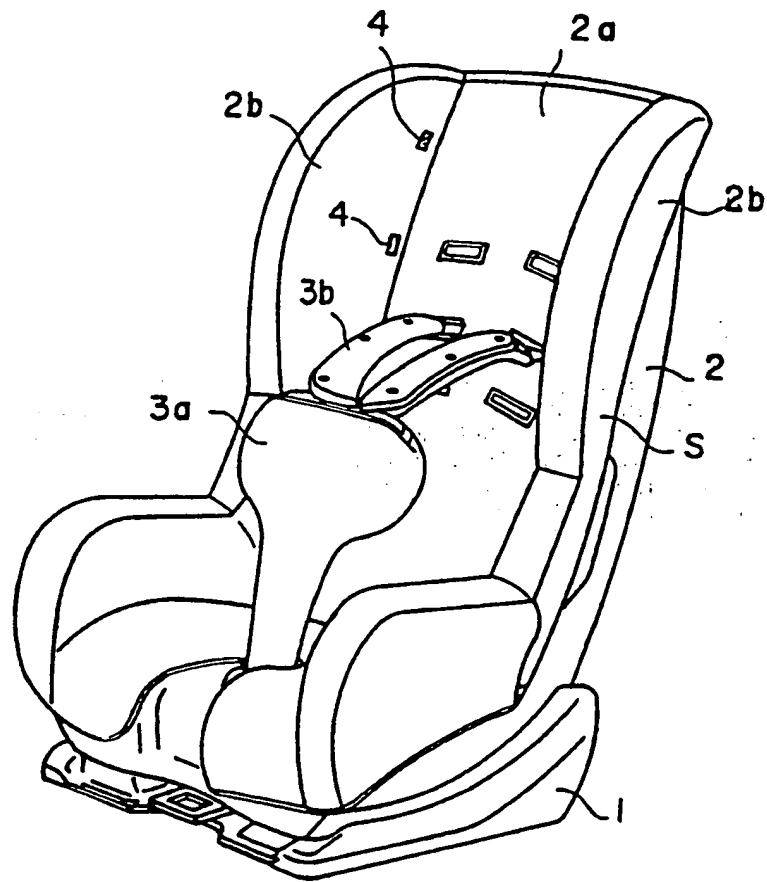


FIG. 2A

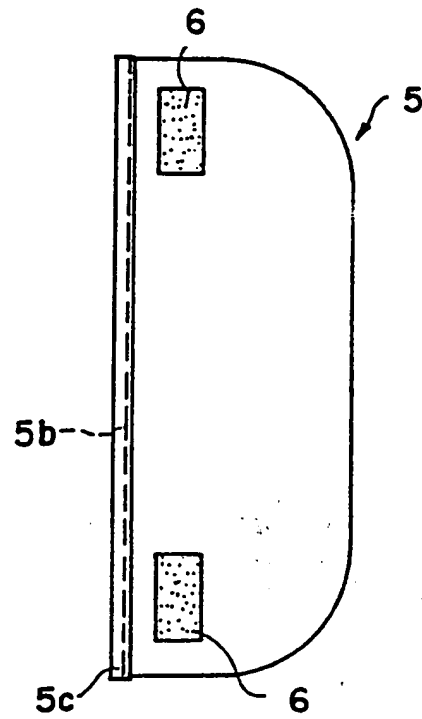


FIG. 2B

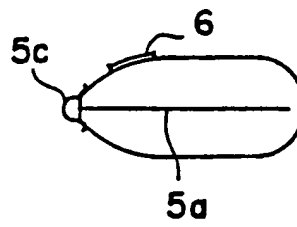
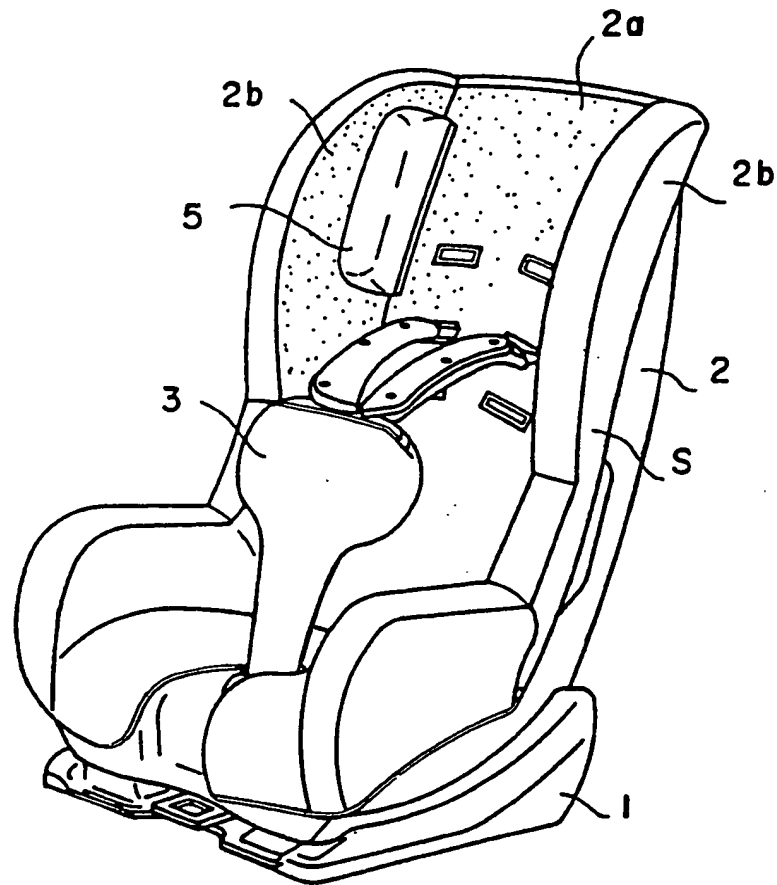


FIG. 3



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Child Restraint Seat for Vehicles

The present invention relates to a child restraint  
5 seat for vehicles and, more particularly, to a child  
restraint seat in which a pillow can be removably  
mounted on a seat back thereof.

Seat belt devices provided on a vehicle such as an  
10 automobile are not suitable for use with small  
children, because they are designed only to restrain  
adult seat occupants. Therefore, child restraint seats  
for restraining a child who is a passenger in a vehicle  
have been developed and are used widely. For use, such  
15 a seat is placed on the seat of the vehicle and is held  
in place by the seat belt with which the vehicle is  
equipped.

A presently available child restraint seat  
includes a base and seat body that can be inclined to  
20 several positions relative to the base. An abdominal  
pad and a belt are provided on the seat body to  
restrain the torso of a child. A shoulder/head  
restraint portion on each of the two sides of a seat  
back of the seat body supports the shoulders of the  
25 child who is on the seat and helps keep him or her in  
the seat.

However, in the above-described known child  
restraint seat, when a child falls asleep, his or her  
head tilts sideways to a great extent; this makes the  
30 sleeping child in the seat uncomfortable.

Accordingly, it has been proposed to place a small  
cushion or the like at the side of the child's head to  
limit the inclination of the head. However, the

cushion may be shifted from its original position and often cannot be kept at its intended position due to the movements of the vehicle or changes in the posture of the child who is taking a nap in the seat.

5

In view of the aforementioned drawback of conventional child seats, an object of the present invention is to provide a child restraint seat to which a pillow can be mounted at a suitable position on a seat back of the seat when necessary to provide a comfortable posture of a child when he or she takes a nap in the seat.

10 According to the present invention, a child restraint seat for vehicles includes a seat body equipped with devices for restraining the child and adapted to be placed on a seat of a vehicle and held in position by a seat belt with which the vehicle is equipped and a pillow which can be removably positioned on a seat back of the seat body. The invention is  
20 characterized in that the seat body has on a portion of a surface of an outer cover which covers the seat back thereof an engaged surface having a loop member of a hook and loop cloth fastener, and in that the pillow has on a surface of an outer cover which covers said  
25 pillow an engaging surface having a hook member of the hook and loop cloth fastener which engages with the loop member of said fastener to hold the pillow in place.

In a preferred embodiment, the invention is  
30 further characterized in that the engaged surface having said loop member is located on a portion of the surface of the outer cover which covers a shoulder/head restraint side portion of the seat back. In another preferred embodiment, the engaged surface having said  
35 loop member is formed on portions of the surface of the

outer cover which covers upper part of the front surface of the seat back and of the shoulder/head restraint side portions of the seat back.

5 The engaged surface may be constituted by at least two spaced-apart loop members, which may be in the form of strips, or by a panel or panels forming a part or parts of the outer cover of the seat back. The engaging surface may be constituted by at least two spaced-apart hook members, which may be in the form of  
10 strips.

In the present invention, the pillow can be attached at a suitable location on the seat back of the seat and is held in place at that position by engaging the hook member provided on the engaging surface of the  
15 pillow with the loop member provided on the engaged surface provided on the seat back of the seat.

In the seat in which a panel (or panels) of the outer cover which covers the seat back forms the engaged surface which can be engaged with the hook  
20 member, the entire seat back can be engaged with the hook member provided on the pillow, thus increasing the area of the seat back on which the pillow can be mounted.

The present invention will now be described in greater detail by way of example with reference to the accompanying  
25 drawings, wherein:-

Fig. 1 is a perspective view of a first embodiment of a seat according to the present invention;

Figs. 2A and 2B are, respectively, plan and side views of a pillow; and  
30

Fig. 3 is a perspective view of a second embodiment of the present invention.

Embodiments of the present invention will be described below with reference to the accompanying drawings.



Fig. 1 is a perspective view of a first embodiment of the present invention. In this embodiment, the structure of the seat is similar to that of a previously known seat described and shown in

5 DE-OS 38 09 968 (October 13, 1988) and will thus be described below only briefly. The seat includes a base 1 and a seat body 2 which can be adjusted to several tilted positions relative to the base 1. An abdominal pad 3a and a belt 3b are provided on the seat body 2 to  
10 restrain the torso of a child. A shoulder/head restraint portion 2b is provided on each of the two sides of a seat back 2a of the seat body 2 to support the shoulders of the child who is on the seat and thereby help keep him or her in the seat.

15 In this embodiment, the entire seat bottom, seat back, arm rests and shoulder/head restraint portions of the seat are covered by an outer cover S, and engaged surfaces 4 having loop members of hook and loop cloth ("Velcro") fasteners are mounted on the surface of the  
20 outer cover S that covers the shoulder/head restraint portions 2b of the back portion of the seat back. The loop members 4, which are in the form of strips, are sewed to the outer cover S at two positions on each seat back portion 2b, i.e., on both the left and right  
25 portions 2b.

Figs. 2A and 2B are, respectively, plan and side views of a pillow 5 that can be removably mounted on either of the two shoulder/head restraint portions 2b of the seat back of the seat. The pillow 5 is composed  
30 of a urethane resin and a fabric which is of the same type as that which forms the outer cover S of the seat and which encloses the urethane resin. The pillow cover is sewed together at a gusset 5a thereof. A mating side 5b of the pillow 5 is covered by a bias  
35 tape 5c. Two engaging surfaces 6 having hook members

of the "Velcro" hook and loop cloth fasteners, which are in the form of strips, are sewed on one surface of the pillow cover at separate positions.

In this embodiment, the pillow 5 can be mounted on a desired position on the seat by engaging the hook members 6 on the pillow 5 with the loop members on the seat and back portions 2b. Once mounted on the seat, the pillow 5 is held in the position in which it is originally mounted by the hook and loop cloth fasteners. This allows a child who is taking a nap to maintain his or her posture in a comfortable state.

Fig. 3 is a perspective view of a second embodiment of the present invention. In this embodiment, the basic structure of the seat is the same as that of the first embodiment. Therefore, the same reference numerals are used to denote parts which are the same, and the description thereof is not repeated. In the second embodiment, variations in the size of the body of a child who uses the child seat are accommodated. As shown in Fig. 3, the portions of the outer cover S that cover the upper parts of the front of the seat back 2a and of the shoulder/head restraint portions 2b are made of a loop cloth fabric component of a hook and loop cloth fastener ("Velcro").

The pillow of this embodiment has the same structure as that of the first embodiment. In this embodiment, the pillow 5 can be fixed to a desired position of the seat back so as to accommodate the differences in the size of the body of a child or changes in the posture of the child, unlike that of the first embodiment.

Although the invention has been described in its preferred forms, it is understood that the present disclosure of the preferred forms can be changed in the details of construction without departing from the spirit and the scope of the appended claims. Examples of such changes will be described below.

The loop cloth members provided on the  
shoulder/head restraint portions in the first  
embodiment may also be provided on the back seat 2a.  
Furthermore, the number of loop cloth members provided  
5 on each side is not limited to two. A single long  
strip of loop cloth may be provided on each side.  
Alternatively, three or more loop cloth strips may be  
provided on each of the shoulder/head restraint side  
portions of the seat back.

10 The pillow may also have hook cloth strips on one  
side and loop cloth strips on the other side. This  
allows a second pillow to be fastened to a pillow  
fastened to the seat back.

Furthermore, the fabric which is used for the  
15 pillow cover may be of a loop cloth which corresponds  
to the loop cloth of the "Velcro" fastener. This  
allows two or more pillows to be piled on top of one  
another more effectively.

As will be understood from the foregoing  
20 description, it is possible according to the present  
invention to support the head of a child who is having  
a nap in the child restraint seat and thereby maintain  
his or her posture. The pillow is made detachable  
relative to the seat back so that it can be removed  
25 from the seat when unnecessary. Furthermore, the  
pillow is engaged with or disengaged from the seat back  
by means of the loop cloth of the "Velcro" fasteners,  
which does not disturb or make the seat occupant of the  
vehicle uncomfortable when the seat occupant touches  
30 it.

CLAIMS:-

1. A child restraint seat for vehicles having a seat body equipped with devices for restraining a child in the seat and adapted to be placed on a seat of a vehicle and held in position by a seat belt with which the vehicle is equipped and a pillow that can be removably positioned on a seat back of the seat body, characterized in that the seat body has on a portion of a surface of an outer cover which covers the seat back thereof an engaged surface having a loop member of a hook and loop cloth fastener, and in that the pillow has on a surface of an outer cover which covers said pillow an engaging surface having a hook member of the hook and loop cloth fastener which engages with said loop member of said fastener.

5

10

15
2. A child restraint seat according to claim 1, and further characterized in that said engaged surface having said loop member is located on a portion of the surface of the outer cover that covers a shoulder/head restraint side portion of the seat back.

20
3. A child restraint seat according to claim 1, and further characterized in that said engaged surface having said loop member is located on upper parts of portions of the surface of the outer cover that cover both a front surface of the seat back and the shoulder/head restraint side portion of the seat back.

25
4. A child restraint seat according to any of claims 1 to 3, and further characterized in that the engaged surface is constituted by at least two spaced-apart loop members.

30

5. A child restraint seat according to any of claims 1 to 3, and further characterized in that the engaged surface having the loop member is in the form of a strip of said loop member.
- 5 6. A child restraint seat according to claim 1, and further characterized in that the said engaged surface having the loop member is a panel forming a part of the outer cover of the seat back.
7. A child restraint seat according to claim 1, and  
10 further characterized in that said engaging surface on the pillow is constituted by at least two spaced-apart hook members on one side of the pillow.
8. A child restraint seat according to claim 1, and  
15 further characterized in that the said engaging surface on the pillow is in the form of a strip of said loop member.
9. A child restraint seat according to claim 7, and  
20 further characterized in that an engaged surface constituted by a loop member of a hooked loop cloth fastener is provided on the other surface of said pillow so that a second pillow can be attached and held in place on said pillow.
10. A child restraint seat for vehicles constructed substantially as herein described with reference to and as illustrated in Figs. 1 and 2; or Fig. 3 of the accompanying drawings.